

REMARKS

In accordance with 37 C.F.R. § 1.114, Applicants have submitted a Request for Continued Examination (RCE) of the above-referenced patent application. By the amendments and remarks provided herein, Applicants have addressed all outstanding issues presented in the Office Action dated January 13, 2005 (hereinafter, the "Action").

Current Status of Claims:

Claims 1, 2, 4-6, 9-11, 13-15, and 18-36 remain pending in this amendment. Claims 3, 7, 8, 12, 16, and 17 have been cancelled. No new claims have been added. Claims 1, 2, 4-6, 9-11, 13-15, and 18 have been amended.

Applicant believes that this response addresses the Examiner's rejection and that any changes do not introduce new matter into the specification, limit the scope of the claims or result in any prosecution history estoppel.

Non-Statutory, Non-Obviousness-Type Double Patenting:

The Examiner has rejected all claims in the application as being anticipated by Claims 1-16 of Mastronarde assigned to the assignee of the present invention. Applicants respectfully traverse the Examiner's rejection.

With regard to independent Claim 1, Claims 1-16 of Mastronarde fail to recite a memory arbiter including a memory controller configured to continue to process a first memory request, and any other requests from a same agent as the first memory request, for a *predefined first period if a second memory request is directed to a same page of memory as the first memory request; and service the second memory request, and any other requests having a priority greater than the first memory request, for a second predefined period after the first predefined period expires*. In particular, Applicants note that Claims 1-16 of Mastronarde fail to disclose first and second predefined periods as recited in independent Claim 1 of the present application.

Independent Claims 6 and 15 include elements similar to Claim 1. Accordingly, Claims 6 and 15 are patentable over the cited reference for the same reasons as those presented for Claim 1.

Therefore, Applicants respectfully request that the Examiner withdraw the non-statutory, non-obviousness-type double patenting rejections of claims 6 and 15.

Applicants note that Claims 2, 4, and 5 depend from Claim 1; Claim 9 depends from Claim 6; and Claim 18 depends from Claim 15. As a result, in addition to any other bases for patentability, Applicants respectfully submit that Claims 2, 4, 5, 9, and 18 are patentable over the cited reference by virtue of at least this dependence. Thus, Applicants respectfully request that the non-statutory, non-obviousness-type double patenting rejections of Claims 2, 4, 5, 9, and 18 be withdrawn.

With regard to independent Claim 10, applicants assert that Claims 1-16 of Mastronarde fail to recite a computer system including a memory controller configured to continue to service current lower priority requests for a *predefined first period if an incoming higher priority request is directed to a same page of memory as the current lower priority requests and to subsequently service the higher priority request for a predefined second period*. In particular, Applicants note that Claims 1-16 of Mastronarde fail to disclose first and second predefined periods as recited in independent Claim 10 of the present application.

Therefore, Applicants respectfully request that the Examiner withdraw the non-statutory, non-obviousness-type double patenting rejection of Claim 10.

With regard to independent Claim 19, applicants assert that Claims 1-16 of Mastronarde fail to recite a memory arbiter including a memory controller configured to interrupt servicing of *higher priority requests after a predefined number are processed to process lower priority requests for a predefined period of time*.

Independent Claims 24, 28 and 33 include elements similar to Claim 19. Accordingly, Claims 24, 28 and 33 are patentable over the cited reference for the same reasons as those presented for Claim 19. Therefore, Applicants respectfully request that the Examiner withdraw the non-statutory, non-obviousness-type double patenting rejections of Claims 19, 24, 28 and 33.

Applicants note that Claims 20-23 depend from Claim 19; Claims 25-27 depend from Claim 24; Claims 29-32 depend from Claim 28; and Claims 34-36 depend from Claim 33. As a result, in addition

to any other bases for patentability, Applicants respectfully submit that Claims 20-23, 25-27, 29-32, and 34-36 are patentable over the cited reference by virtue of at least this dependence. Thus, Applicants respectfully request that the non-statutory, non-obviousness-type double patenting rejections of Claims 20-23, 25-27, 29-32, and 34-36 be withdrawn.

In conclusion, for the reasons stated above, Applicants assert that all of the pending Claims in the present application are patently distinct from and are not obvious slight variations of Claims 1-16 of Mastronarde. Thus, Applicants respectfully request that the non-statutory, non-obviousness-type double patenting rejections of all pending Claims be withdrawn.

35 U.S.C. § 102(b):

The Examiner has rejected Claims 1-14 in the application as being anticipated by Lewchuk. Applicants respectfully traverse the Examiner's rejection.

With regard to independent Claims 1 and 6, applicants assert that Lewchuk fails to disclose the recited ***first and second predefined periods***. Therefore, Applicants respectfully request that the Examiner withdraw the rejections of Claims 1 and 6.

Applicants note that Claims 2, 4, and 5 depend from Claim 1; and Claim 9 depends from Claim 6. As a result, in addition to any other bases for patentability, Applicants respectfully submit that Claims 2, 4, 5, and 9 are patentable over the cited reference by virtue of at least this dependence. Thus, Applicants respectfully request that the rejections of Claims 2, 4, 5, and 9 also be withdrawn.

With regard to independent Claim 10, applicants assert that Lewchuk fails to disclose the recited memory controller configured to receive memory requests and corresponding priorities from the processor, and to continue to service current lower priority requests for a ***predefined first period if an incoming higher priority request is directed to a same page of memory as the current lower priority requests and to subsequently service the higher priority request for a predefined second period***. Therefore, Applicants respectfully request that the Examiner withdraw the rejections of Claim 10.

Applicants note that Claims 11, 13, and 14 depend from Claim 10. As a result, in addition to any other bases for patentability, Applicants respectfully submit that Claims 11, 13, and 14 are patentable over the cited reference by virtue of at least this dependence. Thus, Applicants respectfully request that the rejections of Claims 11, 13, and 14 also be withdrawn.

35 U.S.C. § 103(a):

Claims 15 and 18.

The Examiner has rejected Claims 15-18 in the application as being unpatentable over Lewchuk. Applicants respectfully traverse the Examiner's rejection.

With regard to independent Claim 15, Applicants assert that Lewchuk fails to disclose or suggest an article comprising a machine-accessible medium having stored thereon instructions that, when executed by a machine, cause the machine to, among other things, continue to process a first memory request, and any other requests from a same agent as the first memory request, for a ***predefined first period*** if a second memory request is directed to a same page of memory as the first memory request; and service the second memory request, and any other requests having a priority greater than the first memory request, ***for a second predefined period after the first predefined period expires***. Thus, Applicants respectfully assert that Lewchuk fails to provide basis for a *prima facie* case of obviousness to support the rejection of Claim 15 under 35 U.S.C. § 103(a). Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of Claim 15.

Applicants note that Claim 18 depends from Claim 15. As a result, in addition to any other bases for patentability, Applicants respectfully submit that Claim 15 is patentable over the cited reference by virtue of at least this dependence. Thus, Applicants respectfully request that the rejection of Claim 18 also be withdrawn.

Claims 19-36:

The Examiner has rejected Claims 19-36 in the application as being unpatentable over Lewchuk in view of Iizuka. Applicants respectfully traverse the Examiner's rejection.

With regard to independent Claims 19, 24, 28, and 33, Applicants assert that neither Lewchuk nor Iizuka, either alone or in combination, disclose or suggest a memory controller configured to receive memory requests and corresponding priorities from a microprocessor, ***wherein the memory controller is configured to interrupt servicing of higher priority requests after a predefined number are processed to process lower priority requests for a predefined period of time.*** The Examiner asserts that, while Lewchuk “does not particularly disclose the memory controller is configured to interrupt servicing of higher priority requests after a predefined number are processed to process lower priority requests for a predefined period of time” (Action; page 7), Iizuka nonetheless corrects this admitted deficiency of Lewchuk because Iizuka “discloses interrupting high priority servicing-data-request to allow passing/servicing of nonpriority or low priority data request in order to prevent or keep the nonpriority or low priority data request from starvation” (Action; page 8). While not acceding to the Examiner’s assertion regarding the disclosure of Iizuka, Applicants note that Iizuka fails to disclose or suggest the claimed elements of a memory controller configured to interrupt servicing of higher priority requests ***after a predefined number are processed to process lower priority requests for a predefined period of time.*** Thus, Applicants respectfully assert that Iizuka fails to correct the deficiencies of Lewchuk thereby failing to disclose or suggest all elements of Claims 19, 24, 28, and 33. As a result, Applicants assert that neither Lewchuk nor Iizuka, either alone or in combination, can provide basis for a *prima facie* case of obviousness to support the rejection of Claims 19, 24, 28, and 33 under 35 U.S.C. § 103(a). Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of Claims 19, 24, 28, and 33.

Applicants note that Claims 20-23 depend from Claim 19; Claims 25-27 depend from Claim 24; Claims 29-32 depend from Claim 28; and Claims 34-36 depend from Claim 33. As a result, in addition to any other bases for patentability, Applicants respectfully submit that Claims 20-23, 25-27, 29-32, and 34-36 are patentable over the cited references by virtue of at least this dependence. Thus, Applicants respectfully request that the obviousness rejections of Claims 20-23, 25-27, 29-32, and 34-36 also be withdrawn.

CONCLUSION

In view of the foregoing, it is respectfully asserted that all of the claims pending in this patent application are in condition for allowance.

Should it be determined that an additional fee is due under 37 CFR §§1.16 or 1.17, or any excess fee has been received, please charge that fee or credit the amount of overcharge to deposit account #02-2666.

If the Examiner has any questions, he is invited to contact the undersigned at (503) 264-6473. Reconsideration of this patent application and early allowance of all the claims is respectfully requested.

Respectfully submitted,



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